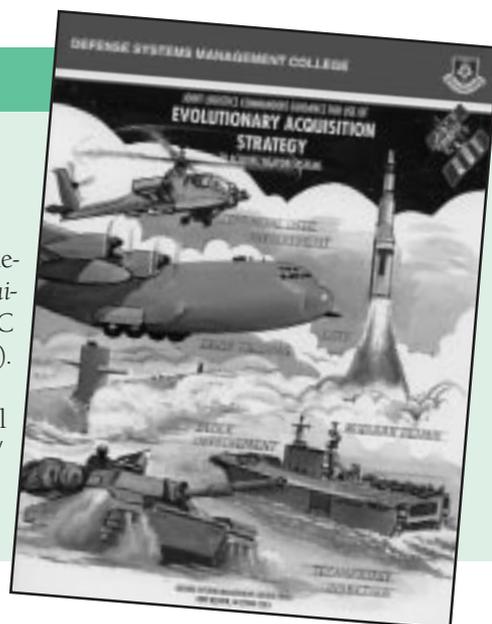


## JOINT LOGISTICS COMMANDERS' GUIDANCE

### For Use of Evolutionary Acquisition Strategy to Acquire Weapon Systems (Revised Ed., June 1998)

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still in development, the Soviet Union has collapsed, U.S. pilots are engaged in combat operations over Iraq and Yugoslavia, our greatest concerns about missile development emanate from Iran and North Korea, and a Pentium II microprocessor runs at 627 megahertz per second ... By the time the F-22 is fielded in 2005, what threats will dominate our headlines and our military operations? What new technologies will shape our lives? Technology is advancing just that rapidly."

An unavoidable conclusion, says Wilson, is that we are currently spending a significant portion of our authorized funds to develop and build systems that will *not* suitably address our needs when they are finally fielded. Furthermore, as the pace of technological change increases, systems that require a decade or more to field are *technologically obsolete* before IOC is achieved.

Retrofitting, he explains, is not a cost-effective option. Concerns even arise that the spare parts will not be available soon after these systems are in the field. Finally, the longer a system's cycle time, the greater likelihood of budget instability and requirements creep.

#### Evolutionary Acquisition

In trying to reduce a system's cycle time, Wilson names three kinds of uncertainty program managers must deal with: uncertainty related to the requirements, uncertainty associated with technology, and uncertainty related to funding. "Reduc-

ing cycle time," according to Wilson, "requires we minimize uncertainty *before* program initiation.

"Because we expect each generation of technology to be a revolutionary leap ahead of the last generation," he says, "we try to fund requirements ten to 15 years in the future. As the F-22 example demonstrates, not only does this practice cause us to design systems based on our 'best guess' of future threats and technology (which is often inaccurate), but it also extends cycle times by making us repeatedly revise the program to incorporate new developments." Instead, he counters, DoD should express requirements in incremental terms, looking ahead *five* years rather than 10 or 15.

He notes that the Joint Staff is currently revising the requirements generation instruction to adopt such time-phased evo-

lutionary requirements.

"We [USD(A&T)] will support the shift to evolutionary requirements by making evolutionary acquisition the preferred way to do business. This method has usually been associated with information technology acquisition, but in order to be more responsive and flexible with the limited budgets and our changing threats, we need to use an evolutionary acquisition strategy for most – not necessarily all – but *most* of our weapon systems development."

He explains that evolutionary acquisition entails defining requirements and building systems in blocks so that the urgent needs are met quickly and longer-term requirements are met by demonstrations, exercises, and experiments. Evolutionary acquisition, says Wilson, allows for rapid fielding and continuous

#### John Wilson on Reducing a System's Acquisition Cycle Time

- Consciously separate technology development from acquisition.
- Commit to an evolutionary acquisition approach as the standard from which DoD will do business from now on.
- Advocate Modeling and Simulation to further Simulation Based Acquisition.
- Advocate and seek as fully and completely as possible the funding that will allow a program to be quickly and efficiently executed.